

(19) World Intellectual Property
Organization
International Bureau



542734

(43) International Publication Date
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number
WO 2004/067318 A1

(51) International Patent Classification⁷: **B60P 7/08**,
B66D 1/16

(21) International Application Number:
PCT/CA2004/000109

(22) International Filing Date: 27 January 2004 (27.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2,417,715 27 January 2003 (27.01.2003) CA
60/442,559 27 January 2003 (27.01.2003) US
2,433,752 27 June 2003 (27.06.2003) CA
60/482,724 27 June 2003 (27.06.2003) US

(71) Applicant and

(72) Inventor: **TREMBLAY, Raynald** [CA/CA]; 5658
Chemin St-André, Jonquière, Québec G7X 7V4 (CA).

(74) Agent: **ROBIC**; Leger Robic Richard, CDP Capital Cen-
ter, 1001, Victoria Square, Bloc E - 8th Floor, Montreal,
Quebec H2Z 2B7 (CA).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

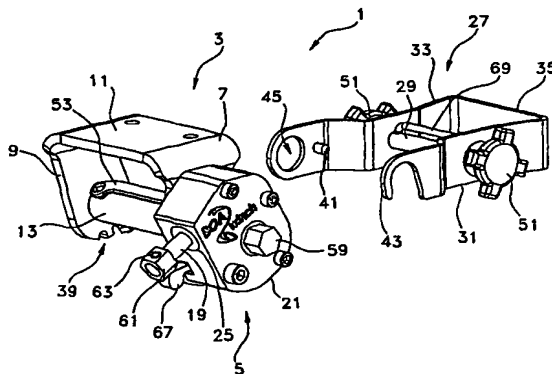
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: WINCH, VEHICLE INCLUDING THE SAME AND METHOD OF OPERATING ASSOCIATED THERETO



(57) Abstract: A winch (1), a vehicle including the same and a method of operating associated thereto. The winch (1) is used with a strap (15) for fastening a load onto a transportation vehicle, and comprises a tightening assembly (3) and a gear assembly (5). The tightening assembly (3) comprises a support structure having first and second support flanges (7, 9) and a cross member (11) extending between the flanges (7, 9). The cross member (11) is devised for mounting onto a corresponding side track of the vehicle. The tightening assembly (3) also comprises a tightening reel (13) for receiving a portion of the strap (15) to be tightened about said reel (13), the tightening reel (13) being pivotally mounted onto the first and second support flanges (7, 9). The gear assembly (5) is operatively connected to the tightening assembly (3), and comprises a gear (17), a worm (19), and a casing (21). The gear (17) is securely mounted about the tightening reel (13) so as to rotate with said reel (13). The worm (19) is positioned adjacent to the gear (17) and operable between a first configuration where the worm (17) is away from the gear (19), and a second configuration where the worm (17) is threadedly engaged with the gear (19) so that a rotation of the worm (17) drives the tightening reel (13) via the gear (17), along opposite directions of rotation, for either fastening or unfastening the strap (15) onto the tightening reel (13). Excess portion of the strap 15 may be wound about a winding assembly (27) which is removably mountable onto the tightening assembly (3).

WO 2004/067318 A1